Data

ARCADIS Varic

Maximize Efficiency in your OR

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medical

ARCADIS Varic

Maximize Efficiency in your OR

Siemens starts a new era in the OR with the *syngo*-based ARCADIS Varic.
syngo provides you with clinical patient information online, so you can optimize efficiency in your OR, allowing entirely new possibilities.

ARCADIS Varic expands the boundaries of your OR by integrating modalities such as CT and MR, as well as the entire clinical network into your OR work process.

ARCADIS Varic sets new standards for efficiency in the OR

Increased efficiency through *syngo*

- Uniform, intuitive user interface for system operation, image postprocessing and networking
- Workflow-oriented task card structure
- Comprehensive connectivity with other modalities and clinical networks

Increased efficiency through optimized clinical workflow

- Maximum flexibility in patient registration
- Easy, intuitive selection of application-specific user programs with VPA (Virtual Patient Anatomy)
- Real multimodality viewing before, during, and after the procedure
- Virtually unlimited possibilities for documentation and archiving
- Fluoro loop* / LSH* (Last Scene Hold)

Increased efficiency with brilliant 1K² image quality

- Optimally matched, continuous 1K² imaging chain, from image acquisition to viewing and archiving
- Large power reserves through 2.3 kW / 23 mA generator power and Power Mode
- High-luminance TFT displays

Increased efficiency through comprehensive connectivity and specialized interfaces

- Supports virtually all DICOM 3 functionalities
- Integrated, digital 1K² navigation interface NaviLink 2D* with automatic image transfer
- *syngo* fastView for convenient selection and viewing of clinical images on the PC

Increased efficiency through user-friendly operation

- Excellent maneuverability due to compact and lightweight design
- Intelligent color coding for fast and precise positioning and operation

ARCADIS Varic – an intelligent investment for today and tomorrow!

* Option


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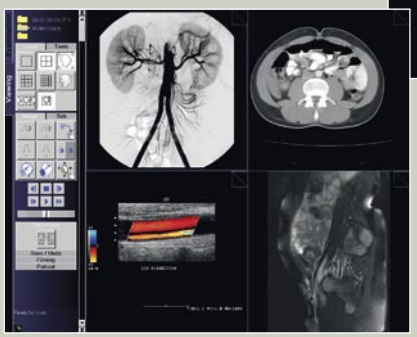

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Technical data

syngo

Patient data administration

Image acquisition

C-arm	
Orbital movement	130° (– 40° to + 90°)
Angulation	± 190°
Horizontal movement	20 cm (7.9”)
Immersion depth	73 cm (28.7”)
Swivel range	± 12.5°
Vertical travel	45 cm (17.7”), motorized
Source-I.I. distance	100 cm (39.4”)
Free space	78 cm (30.7”)

X-ray generator / tube	
Max. pulsed output	2.3 kW
Converter control frequency	15 kHz to 30 kHz
kV range	40 kV to 110 kV
Fluoroscopy	0.2 mA to 15.2 mA (max. 1000 W)
Digital Radiography	0.2 mA to 23 mA (max. 1000 W)
Cassette exposures	max. 20 mA
Pulsed Fluoroscopy	up to 23 mA
Pulse width	min. 7 ms
Pulse rate	up to 8 p/s, up to 15 p/s*
Power Mode	enables temporary max. output in continuous fluoroscopy and pulsed fluoroscopy

Single tank with stationary anode	
Focal spot nominal value (IEC 336)	0.6
Nominal voltage (IEC 613)	110 kV
Optical anode angle (IEC 788)	9°
Inherent filtration	≥ 3 mm Al equivalent

Collimator system	
Iris diaphragm	for concentric, radiation-free collimation
Semi-transparent slot diaphragm	for symmetric, radiation-free collimation, with unlimited rotation

* Option

X-ray TV system

High-resolution X-ray TV system in maintenance-free CCD technology with 1024 x 1024 ($1K^2$) full-size CCD sensor

Constant image brightness due to automatic gain control

High contrast and high spatial resolution

TV matrix	$1K^2$
Digital image rotation	± 360°

X-ray image intensifier

Metal-enamel technology with Mu-metal shielding

Precision electron optics with minimal image distortion and consistent high resolution across the entire image field

Cesium-iodide input screen for minimum quantum noise and excellent resolution

Anti-glare output screen with scattered light trap for high contrast dynamics and prevention of scattered light effects

High-transparency input window

Nominal diameter	23 cm (9")
Zoom format	15 cm (6")
Grid	PB 17/70, f_0 100

Cassette holder*

Format	24 cm x 30 cm (9.5" x 12")
Grid	Pb r17 N70, f_0 85

Displays

18" TFT monochrome display

High-contrast display with high luminance

Screen size	18" (46 cm)
Image matrix	1280 x 1024
Maximum brightness, typical	600 cd/m²
Horizontal / vertical viewing angle	170° / 170°

19" TFT color display

Screen size	19" (48 cm)
Image matrix	1280 x 1024
Maximum brightness, typical	280 cd/m²
Horizontal / vertical viewing angle	170° / 170°

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Fully digital, *syngo*-based online imaging system with continuous 1K² imaging chain (image acquisition, image processing, storage, archiving and documentation). Integrated, uninterruptible power supply (UPS) ensures that image and patient data are secure in the event of a power outage

syngo-based applications	Intuitive menu guidance with function-oriented task cards
	Dedicated, application-related user programs VPA (Virtual Patient Anatomy) with anatomic assignment and selection
	Direct dose level selection for individual adaptation of the radiation dose to the patient's anatomy. Ensures lowest possible dose at high image quality
	Dynamic and static reference image display
	Simultaneous display of subtracted and native images (with subtraction option)

Patient data administration

Patient data administration	Emergency registration
	Pre-registration
	Manual patient registration
	Registration via database query (Patient Browser)
	Registration via DICOM Worklist*

Image acquisition

Operating modes

Selection of 8 application-specific fluoroscopy and radiography curves for the individual operating modes

Digital Fluoroscopy (FL)	Continuous fluoroscopy with 30 f/s (1K²/12-bit matrix)
	Digital filtration
	Manual/automatic image storage
	Sliding weighted averaging for low-noise image display with minimum dose
Digital Radiography (DR)	Digital filtration (1K²/12-bit matrix)
	Sliding weighted averaging for low-noise image display with minimum dose
Digital Pulsed Fluoroscopy (PFC)	Variable frame rate 0.5 to 8 f/s, (0.5 to 15 f/s*)
Digital Subtraction Angiography* / Roadmap*	Variable frame rate 0.5 to 8 f/s, (0.5 to 15 f/s*)
	Simultaneous dual-channel output for image acquisition and postprocessing, simultaneous storage of fill image

* Option

Image display/processing

Data transfer and documentation

Options

Image acquisition

Dose optimization	Integrated dose measuring chamber* with automatic entry of the accumulated dose in a radiation report
	Dose level selection
	I.I. laser aimer for attachment to image intensifier*
	System-integrated I.I. laser aimer*
	System-integrated laser targeting device on tube side*

Image display/processing

Image display	Split screen (1, 4, 9, 16 on 1)
	Digital zoom, fixed zoom, roaming
	Image intensifier zoom (optical zoom)
	Digital image rotation
	Movie function for playback of scenes
	Digital shutters
	Left/right and top/bottom image reversal
	Positive/negative image inversion
	Fluoro loop* / LSH*
Image processing	Application-specific lookup tables (LUTs) for optimum contrast and brightness
	Spatial frequency filtration for edge-enhanced image display
	Pixelshift, Remask, Landmark (with subtraction option)
	Edge enhancement
	Noise reduction
	Motion detection with active noise reduction
Text / graphic functions	Marking, image annotation and comment
	Measuring* of angles and distances

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Technical data

syngo

Patient data administration

Image acquisition

Data transfer and documentation	
DICOM Basic*	DICOM Storage Send/Receive DICOM interface for image data communication in a clinical network (PACS) based on the DICOM 3 standard Sending, receiving and storing of images DICOM Storage Commitment Archiving confirmation from the image archive DICOM Print For printing within the network, on a DICOM-compatible camera or DICOM-compatible printer *syngo* Filming Task Card Enables dedicated image selection prior to printing; preview and grouping of images on the virtual film sheet
DICOM Advanced*	DICOM Advanced contains all the functions of DICOM Basic, plus: DICOM Query/Retrieve Retrieval of studies from a digital archive, a workstation, or other imaging systems; e.g., MR, CT Multimodality viewing DICOM Worklist Management For importing patient/examination data from an independent HIS/RIS system, including HIS/RIS queries via special search criteria MPPS (Modality Performed Procedure Step) For importing / exporting examination data from / to an independent HIS/RIS system All DICOM Advanced functions are also available as individual items in combination with DICOM Basic

* Option

Data transfer and documentation	
Image memory	40,000 images on hard disk in $1K^2$ matrix
Dual network interface*	Network hub for simultaneous connection of the ARCADIS C-arm system with a navigation system (stand alone) and an IT network
NaviLink 2D*	Integrated 2D navigation interface for digital, lossless transfer of 2D image information to the navigation system
DICOM Offline Media (CD r/w)	For documenting images on CD in DICOM and BMP format DICOM Viewer for viewing patient images on the PC (single images only); the DICOM viewer can be written to CD
External monitor connections*	Monitor Out Live (L): For connecting up to 2 external live monitors Monitor Out Live and Reference (L + R): For connecting up to 2 external live and reference monitors each SXGA (1280 x 1024); 75 Hz; 5x BNC (galvanic separation)
Video splitter*	Live monitor (L): Video splitter output for connecting an external live monitor Reference monitor (R): Video splitter output for connecting an external reference monitor VGA interface (splitter), 1 x 15 pin VGA (no galvanic separation)
Printer*	Digital printer for printing on paper Digital high-end printer for printing on film or paper
HIPAA*	Security and Privacy (Health Insurance Portability and Accountability Act)

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Options	
Image acquisition	Digital Subtraction Angiography / Roadmap Pulsed fluoroscopy, pulse rate up to 15 f/s I.I. laser aimer for attachment to image intensifier System-integrated I.I. laser aimer System-integrated laser targeting device on tube side Integrated dose measuring chamber Cassette holder
Image display/processing	Fluoro loop / LSH Measuring of angles and distances
Data transfer and documentation	DICOM Basic DICOM Advanced Dual network interface NaviLink 2D External monitor connections Video splitter Printer HIPAA
Accessories	Sterile covers for C-arm, X-ray tube and image intensifier
NaviVision	Fully integrated optical navigation platform from BrainLAB (BrainLAB AG, D-Heimstetten) for 2D navigation with ARCADIS Varic and ARCADIS Orbic

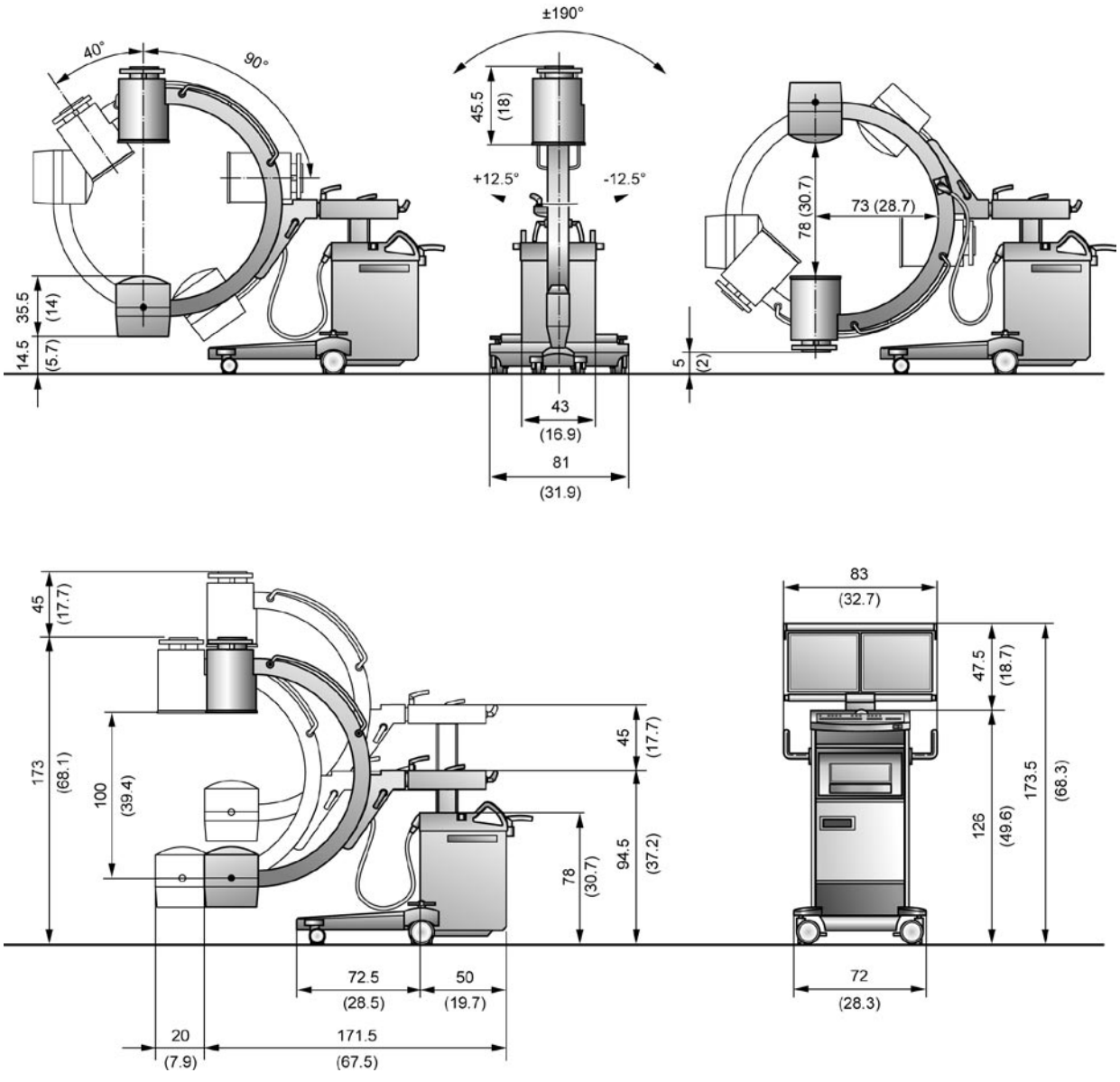
NaviVision is not commercially available in the United States (U.S.A.)

Operating data	
Power requirements	100 V, 110 V, 120 V, 127 V, 200 V, 230 V, 240 V (± 10%); 50/60 Hz (± 1 Hz)

Environmental conditions (operation)	
Temperature range	+ 15°C to + 35°C
Relative humidity	15% to 75%, non-condensing
Barometric pressure	700 hPa to 1060 hPa

Weight	
C-arm chassis	236 kg (520 lbs)
Monitor trolley with integrated UPS	190 kg (418 lbs)

Dimensions in cm (inches)



The information in this document contains general descriptions of the technical options available and may not always apply in individual cases.

The required features should therefore be specified in each individual case at completion of contract.

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